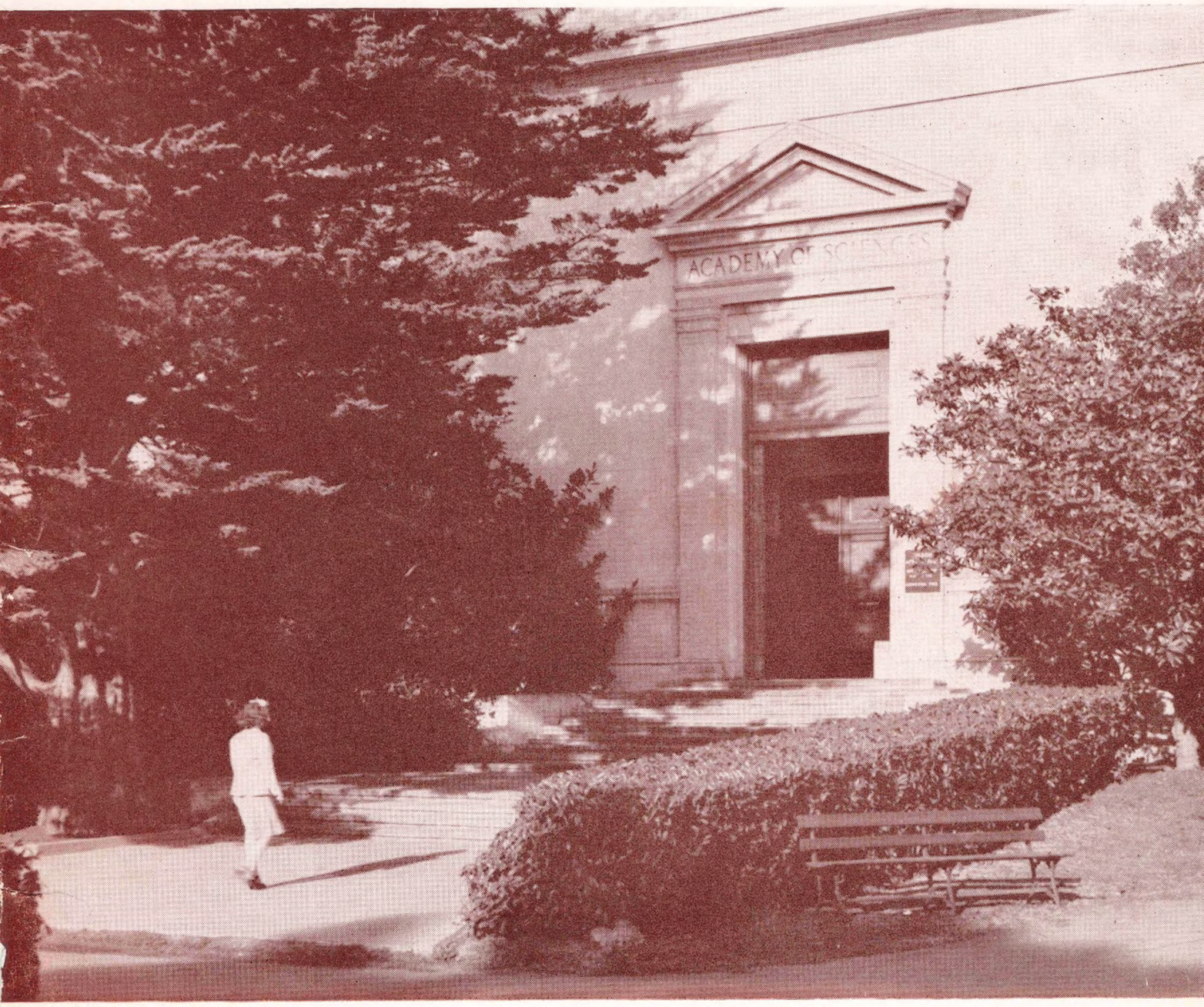
CALIFORNIA ACADEMY OF SCIENCES



Annual Report for the Year 1946

CALIFORNIA ACADEMY OF SCIENCES

GOLDEN GATE PARK

SAN FRANCISCO 18

At the annual election held on February 20, 1946, the Board of Trustees of the Academy was enlarged from seven to twelve members. During the year under review and at the present time the Board is as follows:

J. W. Mailliard, Jr., *President*
Charles Page, *Vice-President*
Miss Louise A. Boyd
Bruce Cornwall
Paul I. Fagan
Edward E. Hills
Daniel E. Koshland
Norman B. Livermore
Mrs. Henry Potter Russell
Brayton Wilbur

The President of the Academy, *ex-officio*
The Treasurer of the Academy, *ex-officio*
H. S. Anderson, *Secretary to the Board*

At the same election the following officers were elected and served during the year under review:

M. E. Lombardi, *President*
Dr. E. P. Meinecke, *First Vice-President*
Dr. George S. Myers, *Second Vice-President*
Dr. Charles L. Camp, *Corresponding Secretary*
Dr. Richard M. Eakin, *Recording Secretary*
Francis P. Farquhar, *Treasurer*

The COUNCIL of the Academy consists of the above mentioned officers with the addition of the Director, Dr. Robert C. Miller, and the Librarian, Dr. Charles H. Danforth.

REPORT OF THE PRESIDENT

For the Year Ending December 31, 1946

The year just past, for the Academy, may best be described as a year of readjustment from wartime conditions and a return to the pursuit of our normal interests, and a year of planning for a broader and more active future.

Notable progress has been made in perfecting plans for future additions to our physical plant, including a planetarium and much needed additions to buildings for storage of collections, for research work and for public exhibits.

Membership — As of December 31, 1946, the Academy had 1060 members of all classes. This is the first time in 12 years that the total membership has exceeded 1000. During the year 65 regular members were elected and 24 resigned, died or were dropped for non-payment of dues. The student membership presents a better picture, 110 having been elected and 34 dropped.

It is interesting to note that between 1940 and 1946 the population of California increased by approximately 30 per cent; that of the San Francisco Bay area by approximately 47 per cent. During this time the Academy's membership rose from 679 in 1940 to 1060 at the end of 1946, an increase of 56 per cent. We must not forget, however, that our membership was up to 1139 in 1932.

During the year 1946, 37 Life Members were elected, almost all under the provision which automatically bestows life membership on members of twenty-five years standing. Dr. H. A. Spoehr was elected a Life Member for signal service rendered the Academy.

Ten Fellows were elected, as follows: L. H. Brown, G. F. Ferris, Peter Frandsen, F. A. Jenkins, Harold Kirby, E. G. Linsley, J. W. McBain, S. B. Shaw, H. U. Sverdrup, C. B. Van Niel.

Four persons were designated Patrons in recognition of important gifts to the Academy: Miss Frances Cooper, who donated her famous original manuscript of Charles Lucian Bonaparte's American Ornithology; Dr. William Barclay Stephens, who donated his outstanding horological collection consisting of clocks and other time-keeping devices; Mr. E. R. Leach, who purchased and donated the world-famous ladybird beetle collection of the late Mr. F. W. Nunenmacher; Mr. Owen Bryant, who donated a collection of some 15,000 named and mounted weevils.

Four Honorary Members were elected as follows: Dr. Alexander Wetmore, the Secretary of the Smithsonian Institution, Washington, D. C.;

Dr. D. M. S. Watson, Professor of Zoology in University College, London, England; Dr. Heloisa Alberto Torres, Director, Museu Nacional, Rio de Janeiro, Brazil; Dr. F. M. MacFarland, Professor Emeritus of Histology in Stanford University and past President of the Academy.

It is with deep regret that we record the death, during the past year, of ten members in the above four categories, as follows: Dr. Frank E. Blaisdell, a Life Member since 1904, a Patron since 1925, and an Honorary Member since 1945; Mr. R. A. Crothers, a Life Member since 1938; Mr. Charles S. Cushing, a Life Member since 1938; Mr. Henry F. Fortman, a Life Member since 1912; Professor Willis L. Jepson, a Life Member since 1909, and a Fellow since 1929; Professor Eliot G. Mears, a Member since 1924 and a Fellow since 1944; Mr. John M. Punnett, a Life Member since 1939; Dr. S. D. Tonnley, a Fellow since 1929; Mr. George F. Volkman, a Life Member since 1937.

As of December 31, 1946, the roster of the Academy's membership was as follows:

Regular members	532
Student members	212
Life members	162
Fellows	96
Honorary members	14
Patrons	26
Benefactors	1
Corresponding members	10
Associate or institutional members	7
TOTAL MEMBERSHIP	1,060

LECTURES – During the year five free public lectures were given on the Dr. Walter B. Scaife Foundation and by arrangement with the National Audubon Society. The popularity of these lectures with the members and the public remains undiminished. In addition, lectures were given by several staff members at the monthly meetings of the Academy. These talks, usually well illustrated and always interesting, deserve a larger audience than they have been getting and it is hoped that the membership will realize in the future the value and interest of these informal talks.

PUBLICATIONS – During the past year only three publications, totaling 100 pages, were issued by the Academy, all related to Botany, as compared

with a desirable average of 500 pages or more. This low output was not the result of lack of material but rather because of the wartime difficulty of securing paper and printing facilities.

GIFTS AND ACCESSIONS – A summary of notable gifts received and of accessions acquired during the year will be found in the Director's Report following.

FINANCIAL – A statement, with comments, of the Academy's financial position as of June 30, 1946, and of the operating income and expenses during the year ending on that date will be found in the Treasurer's Report following the Director's Report.

It is a pleasure to observe that during the past year all but $10,000 of the Academy's debt was paid off. Practically speaking we may now say that the Academy is out of debt.

The cost of operating and maintaining the Academy's plant in Golden Gate Park, exclusive of the Steinhart Aquarium, and of carrying on field and research work, is budgeted annually from July 1 to June 30. The budget under which we are now operating is the largest in the history of the Academy. This is due to the well-known increase in costs of materials as well as to necessary increases in salaries and wages and does not imply an increase in the Academy's activities. It is probable that these operating costs will remain at a level at least as high for some time to come. Fortunately, income from the Commercial Building is also higher than in the past due to a favorable lease consummated during the past year and to a high volume of business currently enjoyed by our lessee. This is enabling the Academy to meet increased expenses out of current income.

It must not be assumed, however, that this satisfactory condition will continue indefinitely. The present financial tendency in this country is inflationary and we may look forward to increasing costs both for services and for materials. Our income from endowment investments, which constitutes by far the bulk of our present recurrent yearly funds, is capable of only a moderate increase and may be curtailed at any time. The proposed additions to plant will require additional funds for upkeep and maintenance.

FUTURE PLANS – No doubt the most important event of the year in its relation to the future of the Academy was the decision of the trustees to proceed with a campaign for raising funds which, added to the building funds now on hand or pledged, will enable the Academy to construct, as soon as building conditions are favorable, a planetarium adjacent to the Academy's

buildings in Golden Gate Park. In addition to the planetarium, for which part of the funds have been conditionally pledged, it is planned to construct an addition to the African Hall, an auditorium and additional housing to relieve the overcrowded condition of several of the Academy's departments.

While the last notable addition to the physical plant was the erection of the Simson African Hall, finished in 1936, the scientific collections of the Academy and the book and map collections of the library have steadily increased during the past several years, resulting in very crowded and unsatisfactory working conditions for the scientific staff. This condition must be relieved and can only be done by funds donated by our members and friends.

As of December 31, 1946, the Academy's building fund amounted, in round figures, to $500,000, practically all of which is dedicated to special purposes other than a planetarium. To build a planetarium and provide for its maintenance will require at least a like sum, and to provide the necessary room for relieving overcrowded conditions will require still more funds of substantial amount even if building costs do not increase further. It is therefore evident that on the success of the coming drive for funds depends in large measure the progress of the Academy in the immediate future. The campaign will be inaugurated by the trustees in April and it behooves all members of the Academy to do their utmost to make the drive successful.

The great migration of population to the Pacific Coast States which has recently occurred and which is still going on, brings sharply to our attention the fact that the Pacific Coast and the Pacific Ocean itself is America's last frontier, just as the Great Plains and the Rocky Mountain region were after the Civil War.

It is the good fortune of our Academy to be situated on this frontier and to have already established some of the world's most notable collections in the field of natural sciences connected with the Pacific area. Yet it remains a little explored scientific frontier and the opportunity is now here, through the generosity of past friends and benefactors, and with the help of new ones, for the Academy, by taking advantage of its magnificent opportunities, to serve the Pacific Coast in an ever-growing field of usefulness.

REPORT OF THE DIRECTOR

For the Year Ending December 31, 1946

The following report, presented at the Annual Meeting of February 19, 1947, sets forth briefly the scientific and educational activities of the Academy for the year 1946.

The year just past may be characterized as a year of reconversion from a wartime to a peacetime basis — a process complicated by rising prices, unavailability of essential materials, badly crowded conditions, and an extraordinarily large backlog of work in all departments that inevitably accumulated during the war years. It is not my intention, however, to paint a gloomy picture. Like a cheerful physician, I can say that the patient is doing as well as possible under the circumstances. We have in fact made substantial progress, and the prospects are bright for further and more rapid progress in the years ahead.

Staff Changes

On February 1, Dr. Edward S. Ross, Associate Curator of the Department of Entomology, returned to his position of executive officer of that department after four years' service in the armed forces. During the last two years of that period he was in charge of a Malaria Survey Unit, first in New Guinea and then in the Philippine Islands. He was retired from the Army with the rank of Major.

On August 15, Miss Alice S. Mulford, Supervisor of Junior Activities, resigned to accept the position of Curator of the Oakland Public Museum. Miss Joanne Taylor was promoted to the position formerly held by Miss Mulford, and Mrs. Lois Fink was employed as a part-time assistant in the same department.

Mr. Cecil Tose returned to the Academy's staff after a four years' absence, being appointed Preparator in the Department of Exhibits.

Miss Mary Louise Perry, Assistant in Ichthyology, was transferred to the Department of Birds and Mammals. Mrs. Lillian Dempster was appointed to the position formerly held by Miss Perry in the Department of Ichthyology.

Attendance

Gratifying evidence of increased public interest in the Academy's program is reflected in the attendance at the Museum and Aquarium in 1946. The figures are as follows:

North American Hall	279,398
Simson African Hall	292,228
Steinhart Aquarium	718,775
Total of all buildings	1,290,401

In comparison with last year's figures, these represent an increase of 10,676 visitors to the North American Hall, 21,303 visitors to the African Hall and 44,124 visitors to the Steinhart Aquarium, or an overall increase of 76,103.

The Museum was visited during the year by 222 classes, including 7,831 students, from public and private schools, colleges and universities within a radius of one hundred miles of San Francisco. The Aquarium was visited by 121 classes, including 4,972 students. The student attendance is included in the total attendance given above.

Museum Exhibits

The public exhibits have been maintained and some new ones added, notwithstanding limitations of space and a reduced staff in the Department of Exhibits. A notable addition is the horological collection of Dr. William Barclay Stephens, a part of which has been put on display in a corridor of the North American Hall. More of the collection will be installed when space becomes available. This is undoubtedly the finest collection of time-keeping devices in western North America, and when completely installed will equal if not excel any similar exhibit in this country.

Mr. William B. Pitts has made noteworthy additions to his already magnificent collection of gem minerals and semi-precious stones. This exhibit continues to be a major attraction to the public, and its educational value elicits much favorable comment.

More space is urgently needed, both to extend these and other exhibits, and to enable us to vacate the space at the end of the Hall of North American Mammals, now used for storage, and to restore it to public use.

One fine specimen that is not yet on exhibit because of lack of space, is a large mounted specimen of Alaska Brown Bear, donated by the American Museum of Natural History. This specimen came to us through the efforts of Mr. Norman B. Livermore, who also kindly volunteered to pay the transportation charges from New York.

A list of these gifts, together with the numerous others, received by the Museum during the year, will be found in the Director's office where it is open for inspection.

Public Lectures

The following public lectures were given in 1946, the ones marked with an asterisk being lectures on the Dr. Walter B. Scaife Foundation:

January	2	Mr. Walter W. Bradley, California State Mineralogist: California's Mineral Resources
January	9	Dr. Parker D. Trask, Professor of Geology in the University of Wisconsin: Mexico and Its Volcano Paricutin
January	21	Dr. Olin Sewall Pettingill, Jr., National Audubon Society: Wildlife in Action*
March	4	Mr. John H. Storer, National Audubon Society: Wings, Fins, and Antlers*
April	17	Mr. Alexander Sprunt, Jr., National Audubon Society: Wonders of the Southern Wilderness*
May	15	Dr. Edward S. Ross, California Academy of Sciences: The Mangyans of Mindoro
July	17	Miss Grace I. Crowe, California Academy of Sciences: Significance of the Songs and Calls of Birds
August	21	Dr. J. Linsley Gressitt, Instructor in Entomology in Lingnan University: The Rehabilitation of Science in the Orient
September	18	Miss Veronica J. Sexton, California Academy of Sciences: Libraries and Bookshops of Eastern Cities
October	9	Mr. John Thomas Howell, California Academy of Sciences: Botanizing in the High Sierra
November	7	Dr. Olin Sewall Pettingill, Jr., National Audubon Society: Wilderness Mischief*
December	5	Mr. C. A. Harwell, National Audubon Society: Music of the Out-of-Doors*

*Scaife Lectures

Student Section

Special mention should be made of the increasing success of the Student Section of the Academy, first under the direction of Miss Alice Mulford and, since her resignation on September 1 to become Curator of the Oakland Public Museum, under the supervision of Miss Joanne Taylor and Mrs. Lois Fink. This group has increased during the year from 139 as of January 1 to 212 on December 31. It has engaged in an abundance of activities, including field trips, attendance at lectures adapted to youthful interests, and preparation of small exhibits, such as posters, charts, models, relief maps, etc. Some of this work was presented at the November meeting of the Audubon Society of the Pacific, some is being currently exhibited at the Oakland Public Museum, and some is on exhibit here. The group also issues a "Student News Letter" in mimeographed form.

The student work is urgently in need of larger and more suitable quarters, and endowment adequate for its proper support. Here is an unusual opportunity for some philanthropic citizen to accomplish great and permanent good.

Dr. Robert C. Miller instructing a group of junior entomologists

Field Work

Field work by the Museum staff, largely suspended from 1942 through 1945, was resumed in 1946 with nine members of the Museum staff making eleven field trips of longer or shorter duration to points ranging from Newport, Oregon, to Acapulco, Mexico, and from the seashore to the High Sierra.

Mr. M. E. Lombardi, Dr. G. Dallas Hanna, Mr. Allyn G. Smith, and Mr. Robert P. Dempster visited Mendocino County to collect marine invertebrates on the low tides at the beginning of May. Dr. Hanna, with Messrs. Smith and Dempster, visited Humboldt County at the end of May for the same purpose.

During parts of August and September Dr. Hanna made an extensive trip through northern California, as far as Klamath Falls, Oregon. He studied obsidian beds in Modoc County, and collected fossil fresh water shells near Dorris, California. In December, Dr. Hanna collected Eocene fossils in Kern County.

Dr. Robert T. Orr spent two weeks in June studying birds and mammals in the Lake Tahoe region.

Mr. Joseph R. Slevin spent the month of May in herpetological collecting in Arizona and made subsequent trips to the Big Basin, Santa Cruz County, and the northwest coastal region of California for the same purpose.

Mr. J. T. Howell spent two weeks in July collecting plants in the Sierra Nevada, in Inyo and Fresno counties. He also made numerous shorter trips in connection with his current work on the flora of Marin County.

Dr. E. C. Van Dyke collected insects in the Davis and Chisos mountains of Texas during part of June and July, in the company of Messrs. Manuel and Joseph Marquis. Dr. Van Dyke and Dr. E. S. Ross, accompanied by Mrs. Ross and Mr. Skinner, made a collecting trip to Mexico in November, going as far south as Acapulco. In June, Dr. Edward L. Kessel, accompanied by Mrs. Kessel, traveled through northern California and into Oregon as far as Newport, collecting flies of the family Platypezidae.

Mr. Donald Simpson, collector for the Steinhart Aquarium, made numerous trips to obtain live fishes and other aquatic organisms. The longest of these trips were to San Diego, California, and to Guaymas, Mexico.

The Director made a trip of 10,000 miles by automobile in August and September, visiting museums, planetariums and aquariums in the eastern United States. He also took part in a Biological Colloquium at Oregon State College on April 27, and participated in the meetings of the Pacific Division, American Association for the Advancement of Science, in Reno, Nevada, June 17-22, and of the Western Society of Naturalists in Whittier, California, December 27-29.

Dr. William Barclay Stephens with part of his famed horological collection

Accessions

A considerable number of additions to the departmental collections were made during the year, a substantial number deriving from the expeditions mentioned above, and a still larger number from gifts by friends of the Academy.

The Department of Botany accessioned 6,198 new specimens. Of these 3,688 were received through exchange, 2,510 by gift, and 1,478 were collected by the department. As a matter of fact, the task of caring for specimens received through gift and exchange left the departmental staff but little time for additional collecting.

Mr. Lewis S. Rose and Dr. Thomas L. Kearney, research associates of the department, have both been in the Herbarium nearly every day, contributing their services as a labor of love.

The Department of Entomology is equally fortunate in the number of its friends. Dr. E. C. Van Dyke spends every day at the Museum in his capacity as Honorary Curator of Coleoptera. The Reverend Edward S. Guedet, Research Associate in Lepidoptera, is a regular visitor, applying himself to the mounting of great numbers of valuable papered specimens of Lepidoptera, which would otherwise be unavailable for study.

Accessions for 1946 total 226,032 specimens. Of these, all of which are worthy of report, restrictions of space limit us to the mention of the E. O. Essig collection of Coccidae (100,000 specimens), 38,530 specimens of Old World Coleoptera donated by Mr. Owen Bryant, the Nunenmacher collection of Coccinellidae (13,000 specimens) purchased for the Academy by Mr. E. R. Leach, the L. W. Saylor collection of Scarabaeidae (30,000 specimens), and the combined collections of G. E. and R. M. Bohart and J. L. Gressitt, amounting to about 10,000 specimens. The inadequacy of this record is best expressed by the statement that fourteen persons donated more than 1,000 specimens each to the Department of Entomology.

The Department of Ichthyology has flourished during the year, with important contributions by W. M. Morton, W. I. Follett, John Strobeen, R. R. Harry, Jr., George Grogan, Donald A. and Helen Simpson. This year, as the year before, the largest number of specimens has been contributed by Carl L. and Laura Hubbs and their students, working out from the Scripps Institution of Oceanography at La Jolla.

The Department of Herpetology received 605 accessions during the year. Of these, 558 were collected by the Curator. For whatever reason, the general public appears less inclined to collect snakes, lizards and salamanders than insects, flowers and fish.

The Department of Ornithology and Mammalogy acquired 688 specimens during the year, 385 birds and 303 mammals. All but two of these were gifts. The most outstanding accession was a gift of 237 birds and 75 mammals from southeastern Alaska presented by Mr. J. Dan Webster, now of the Rice Institute, Texas. Mr. Donald S. Longanecker of the Hooper Foundation for Medical Research presented an excellent series of 160 bats from the Lake Tahoe region.

The Department of Paleontology, in addition to receiving and caring for substantial collections acquired by gift and field work, has catalogued and labeled about 800 type specimens, bringing the total of catalogued type specimens in the collection to 8,660 with several hundred additional specimens on hand to be added.

The growth of the Library during 1946 was approximately four times greater than that of any previous year, the total number of items accessioned being 37,437. The George Davidson library consisted of 14,419 items, including some 5,000 complete volumes, 146 personal note books, 164 mounted pictures and photographic plates, and a great collection of serials and government documents; also, Davidson's portrait in oil, painted by Benoni Irwin in Paris in 1874.

The Frank E. Blaisdell bequest totalled almost 2,000 items, principally author separates on American Coleoptera. Dr. Isabel McCracken donated her valuable library of some 1,100 works on Hymenoptera. Mr. Ernest Mailliard gave the remainder of his father's library, consisting of 1,700 items.

Our European exchanges which were inactive through the war years have been revived. Fairly large shipments have arrived, and it is encouraging to see how many great institutions published each year without interruption.

Our map collection expanded greatly with the receipt of over 9,000 maps from the Army Map Service. Mr. Slevin presented the Aerial Photograph Assembly, consisting of 40 maps of the Galapagos Islands, made by the Navy during the war. The U. S. Army Engineers, Western Defense Command, gave us over 600 maps, including many for coast areas which we lacked.

Of the total number of accessions to the library during the year, 1,946 were acquired by purchase, 4,220 by exchange, and by far the greater number, 31,271, by gift or bequest.

Committee on Latent Natural Resources

It seems appropriate here to make a brief report of the work of the Academy's Committee on Latent Natural Resources, established by the Academy's Council at its meeting of January 16, 1942, to organize research relating to the then existing national emergency. The personnel of this committee as at present constituted is as follows:

Dr. Wilbert M. Chapman, Curator of Fishes, California Academy of Sciences

Dr. J. S. Davis, Director, Food Research Institute, Stanford University

Dr. Ewald T. Grether, Dean of the School of Commerce, University of California

Dr. Olaf P. Jenkins, State Mineralogist, California State Division of Mines

Dr. G. Dallas Hanna, Curator of Paleontology, California Academy of Sciences

Dr. Chauncey D. Leake, Dean of the Medical Branch, University of Texas

Mr. Herbert F. Ormsby, Director of Research, California State Chamber of Commerce

Dr. W. W. Robbins, Professor of Botany, University of California, Davis

Dr. Harald U. Sverdrup, Director, Scripps Institution of Oceanography

Dr. Richard Van Cleve, Chief Biologist, International Pacific Salmon Fisheries Commission

Dr. F. W. Weymouth, Professor of Physiology, Stanford University

Dr. Ray Lyman Wilbur, Chancellor, Stanford University

Dr. Robert C. Miller, Director, California Academy of Sciences (Chairman)

This Committee, by reason of the wide geographic distribution of its members, has carried on its work chiefly by correspondence. It has functioned quietly and with little publicity. Nevertheless it has been behind the scenes in many important undertakings, and has in the aggregate a rather surprising number of accomplishments to its credit.

The Committee very early secured the volunteer services of Dr. Joseph Hollister, who spent several months mapping the known locations of strategic minerals in the State in cooperation with the State Division of Mines. Attention was given to the following minerals: antimony, magnesite, iron, lime-

stone, molybdenum, titanium, vanadium, copper, and zinc. Dr. Olaf Jenkins, the State Mineralogist, has written the Academy: "Government agencies, especially, have found this preliminary assembly of data a great saving of time in reviewing the mineral resources of the State."

The Committee recommended to the Oceanographic Society of the Pacific that a symposium be held under the auspices of that organization on the subject, "Resources of the Sea for a Wartime Economy," and cooperated in arranging the following program which was held on June 18, 1942, in connection with the Salt Lake City meeting of the Pacific Division, American Association for the Advancement of Science:

1. The Latent Marine Fisheries Resources of California and Mexico. R. S. Croker, California State Fisheries Laboratory, San Francisco
2. The Latent Marine Fisheries Resources of Washington and Alaska. W. M. Chapman, Washington State Shellfish Laboratories, Gig Harbor
3. Kelp Resources of the Coast of Southern California. J. F. Wohnus, Scripps Institution of Oceanography, La Jolla
4. Kelp Resources of the Northwest and Alaska. G. B. Rigg, University of Washington, Seattle
5. The Biotic and Economic Relations of the Plankton. T. Kincaid, University of Washington, Seattle

Through the cooperation of the California Division of Fish and Game, the papers presented on this symposium were given prompt publication, appearing in the October, 1942, issue of "California Fish and Game," the journal of the State Division of Fish and Game.

During the second year of the war a critical shortage developed of the black glass used in making mirrors for navigation instruments. Dr. G. Dallas Hanna suggested the use of obsidian as a substitute. Mr. Allyn G. Smyth, Research Associate in Paleontology, collected a number of samples of obsidian in Lake County which proved wholly satisfactory for the purpose, and were used in the manufacture of some hundreds of the needed mirrors. This is a striking example of a latent natural resource developed to meet a specific wartime need. An investigation is now being made of the availability of obsidian for other optical uses.

The Committee brought to the attention of Governor Warren the importance of the tuna fisheries of the central and western tropical Pacific, as observed by Dr. Chapman during fourteen months in those areas. As a result, the Academy's Director was asked to head up a committee—the Tuna Industry Project Committee—of the State Reconstruction and Reemployment Commission to deal with this matter. This committee in turn was successful in having

the two houses of the State Legislature adopt a joint resolution memorializing the Congress on the importance of this fishery to the United States; and representations have also been made by the governors of Oregon, Washington and California to the State Department and to the President.

The chairman of the Committee on Latent Natural Resources also served as chairman of two subcommittees of the California State Chamber of Commerce, one on Protection of Salmon Resources (1945-46), and one on the Sardine Reduction Permit Problem (1946-47).

The Committee on Latent Natural Resources has effectively discharged the functions for which it was appointed, and has had a leavening influence extending far beyond the range of its immediate activities. Now that the emergency which called it into existence has passed, the Committee will be retained as a stand-by committee for consultation on similar problems as need may arise.

REPORT OF THE TREASURER

For the Fiscal Year Ended June 30, 1946

The funds of the Academy are shown in the accompanying balance sheet, Exhibit A, as they existed on June 30, 1946.

There was at that date an unexpended balance in the General Operating Fund of over $119,000. This balance is largely the result of increased rent received in the past few years from the Commercial Building and of non-recurring income such as a war-time contract with the Navy for special services. With a currently balanced budget, there is adequate working capital for the immediate future.

The Special Funds, amounting to a little over $28,000, are to be used for designated purposes. The W. B. Scaife Fund provides for lectures to be given for the benefit of the public. The Alvord Fund is available for the benefit of the Botanical Department; the J. D. Grant Fund is available for such purposes as the trustees may deem to be for the best interests of the Academy; the Miscellanous Funds consist of a number of temporarily unexpended balances.

New Construction Funds, amounting to nearly $500,000, are available for expenditure upon the Museum additions and accompanying special purposes provided for in the plans that are being developed by the Council and the Board of Trustees.

The Endowment Funds are the principal source of income with which the Academy conducts its operations. The Ignatz Steinhart Trust provided for the erection of an Aquarium to be operated by the Academy with current funds supplied by the City and County of San Francisco.

The Museum Fund represents the book value of the plant at Golden Gate Park. The original cost of buildings and equipment has been reduced by charges for depreciation in the past. The values shown for Collections and Library are derived partly from expenditures in past years, partly from appraisals; they do not represent current appraised values, which would, indeed, be almost impossible to estimate.

The income and expenses of the Academy for the fiscal year ended June 30, 1946, may be summarized, in round figures, as follows:

INCOME

From the Commercial Building, under lease expiring in 1984; net (after depreciation of $10,300)	$118,500	
From Securities, for General Operating Fund	1,000	
From sale of bulletins, post cards, etc.	4,200	
From membership dues	2,700	
From miscellaneous sources	1,200	
		$127,600

EXPENSES

Administrative salaries	$ 4,600	
Departmental salaries	31,900	
Operating salaries and wages	12,500	
Departmental expenses	8,600	
General operating expenses	8,200	
Depreciation of buildings and equipment	13,900	
Trustees' expenses	3,800	
Amortization of bond premiums	1,200	
Interest paid on mortgage	4,500	
		89,200
Excess of income over expense		$ 38,400

The indebtedness of the Academy on account of money borrowed for the purpose of erecting the Simson African Hall in advance of receipt of the Simson Trust moneys has been reduced to $10,000. This is considered to be an obligation payable out of the Simson Trust. The balance, secured by a mortgage on the Commercial Building, is being kept open in order to provide for temporary additional financing if needed.

Since the close of the last fiscal year, June 30, 1946, the financial position of the Academy has continued to improve. Expenses have increased, but have been budgeted within the expected income available for general operations. Gifts for new construction have been received, and the end of the current fiscal year should show a substantial additional amount on hand for this purpose.

FRANCIS P. FARQUHAR, *Treasurer*

CALIFORNIA ACADEMY OF SCIENCES

Balance Sheet as at June 30, 1946

Assets and Liabilities

General Operating Fund		
Cash on hand and in banks	$ 86,690.48	
Accounts receivable	1,026.02	
Inventory of merchandise for sale	3,980.85	
Stocks of corporations	94.09	
	$ 91,791.44	
Less interest payable	64.15	
	$ 91,727.29	
Expenses of lease, to be recovered from income	27,801.90	
Total		$ 119,529.19
Special Funds		
Cash in banks	$ 14,322.80	
United States Government securities	5,000.00	
Stocks of corporations	9,000.00	
Total		$ 28,322.80
New Construction Funds		
Cash in banks	$ 54,182.43	
United States Government securities	381,813.83	
Stocks of corporations	68,245.00	
Note receivable	1.00	
	$504,242.26	
Less Mortgage payable	10,000.00	
	$494,242.26	
Architects' plans	4,329.52	
Total		$ 498,571.78
Endowment Funds		
Cash in bank	$ 4,100.56	
Real estate – Commercial Building	845,488.95	
Real estate – Jessie Street	8,083.65	
Total		$ 857,673.16
Ignatz Steinhart Trust		
Cash in banks	$ 8,356.40	
Due from City and County of San Francisco	1,015.25	
Aquarium – Building and contents	301,231.25	
Total		$ 310,602.90
Museum Fund		
North American Hall	$ 92,350.27	
Simson African Hall	179,069.84	
Furniture and equipment	26,229.96	
Collections	296,123.14	
Library and publications	220,347.08	
James Moffitt Library	2,000.00	
Total		$ 816,120.29
		$2,630,820.12

Balance Sheet (Continued)

Fund Balances

General Operating Fund		
Unexpended income and gifts, available for current operations and such other purposes as may be authorized		
Total		$ 119,529.19
Special Funds		
W. B. Scaife Lecture Fund	$ 10,162.55	
Alvord Botanical Fund	5,337.18	
J. D. Grant Fund	10,314.57	
Miscellaneous Funds	2,508.50	
Total		$ 28,322.80
New Construction Funds		
Leslie Simson Fund	$275,718.84	
James F. Morrison Auditorium Fund	176,689.16	
James Moffitt Memorial Fund	27,578.42	
Alice Eastwood Botanical Fund	12,288.08	
Ida May Carmany Terrarium Fund	5,095.98	
Memorial Fountain Fund	1,201.30	
Total		$ 498,571.78
Endowment Funds		
James Lick Endowment	$804,902.31	
Charles Crocker Endowment	20,000.00	
James W. Hendrie Endowment	32,770.85	
Total		$ 857,673.16
Ignatz Steinhart Trust		
Principal	$250,000.00	
Income added	60,602.90	
Total		$ 310,602.90
Museum Fund		
Gifts, bequests, and appropriations from income received during a period of many years, less depreciation and abandonments		
Total		$ 816,120.29
		$2,630,820.12

CALIFORNIA ACADEMY OF SCIENCES

Museum and Aquarium Personnel*

ADMINISTRATIVE

Robert C. Miller, *Director*
G. Dallas Hanna, *Administrative Assistant*
Vashti F. Hawley, *Secretary to the Director*

CLERICAL

Hazel Blyler
Winifred Booker
Vida Brooke
Evelyn Deasy
Georgia Fitzsimmons
Margaret Gatewood
Victoria Griffen
Katherine Gushe
Manda Towne

DEPARTMENT OF AQUATIC BIOLOGY

John L. Kask, *Curator*
Robert P. Dempster, *Aquatic Biologist's Assistant*
William B. Richardson, *Aquatic Biologist's Assistant*

DEPARTMENT OF BOTANY

Alice Eastwood, *Curator*
John T. Howell, *Assistant Curator*
Thomas L. Kearney, *Research Associate*
Lewis S. Rose, *Research Associate*
Elizabeth Vincent, *Assistant*
Alice B. Wright, *Assistant*

DEPARTMENT OF ENTOMOLOGY

Edwin C. Van Dyke, *Honorary Curator*
Edward S. Ross, *Associate Curator*
Edward L. Kessel, *Research Assistant*
E. O. Essig, *Research Associate*
G. F. Ferris, *Research Associate*
J. Linsley Gressit, *Research Associate*
E. S. Guedet, *Research Associate*
E. Gorton Linsley, *Research Associate*
R. L. Usinger, *Research Associate*
Lawrence W. Saylor, *Research Associate*
Hazel Pehrson, *Assistant*

DEPARTMENT OF EXHIBITS

Cecil Tose, *Preparator*
Velma Harris, *Assistant Preparator*
Raymond Smith, *General Assistant*

*May 1947

DEPARTMENT OF HERPETOLOGY

Joseph R. Slevin, *Curator*

DEPARTMENT OF ICHTHYOLOGY

Wilbert M. Chapman, *Curator*
W. I. Follett, *Research Associate*
Lillian Dempster, *Assistant*

LIBRARY

Veronica J. Sexton, *Executive Librarian*
Ingeborg Boeckel, *Assistant*
Minerva Hirst, *Assistant*

DEPARTMENT OF ORNITHOLOGY AND MAMMALOGY

Robert T. Orr, *Curator*
Grace I. Crowe, *Assistant*
Mary L. Perry, *Assistant*

DEPARTMENT OF PALEONTOLOGY

William B. Pitts, *Honorary Curator of Gem Minerals*
M. Vonsen, *Honorary Curator of Mineralogy*
G. Dallas Hanna, *Curator*
Leo G. Hertlein, *Assistant Curator*
Allyn G. Smith, *Research Associate*
A. M. Strong, *Research Associate*
Myrtle Kuhlmeyer, *Assistant*

JUNIOR SCIENCE GROUP

Joanne Taylor, *Supervisor*
Lois Fink, *Assistant*

SHOP

G. Dallas Hanna, *Superintendent*
Albert S. Getten, *Instrument Maker*
Raymond Greeby, *Cabinet Maker*
Frances Greeby, *Assistant in Optics*

MAINTENANCE AND OPERATING

John M. Barclay
Nelson A. Brinning
Benjamin T. Culleton
John Dobson
John J. Griffin
John R. Hooper
Raymond L. Jones
George Koltunovsky
Patrick McArdle
Leo J. McClain
John McKenna
Arthur J. Noonan
Donald A. Simpson
Nicholas Udaloff
Peter Verigin